

INTERNATIONAL COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference S80411373:TPG	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU2002/001767	International Filing Date (day/month/year) 24 December 2002	Priority Date (day/month/year) 24 December 2001
International Patent Classification (IPC) or national classification and IPC Int. Cl.⁷ C07H 19/00, 23/00		
Applicant UNISEARCH LIMITED (et al.)		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheet(s).

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 23 July 2003	Date of completion of the report 23 March 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer K. LEVER Telephone No. (02) 6283 2263

I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the claims, pages , as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished
- ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

- ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 3, 5, 9, 10, 12, 15, 17, 18, 21-23, 25, 26, 28-33, 36, 37, 39-43	YES
	Claims 1, 2, 4, 6-8, 11, 13, 14, 16, 19, 20, 24, 27, 34, 35, 38	NO
Inventive step (IS)	Claims	YES
	Claims 1-43	NO
Industrial applicability (IA)	Claims 1-43	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for the purposes of this report:

D1: WO 1992/02533

D2: Tierney et al, Organic Letters Vol. 2, No. 22, 2000

D3: WO 1999/09045

D4: Yu et al, J. Am. Chem. Soc., 122, 2000

D5: Telser et al, J. Am. Chem. Soc., 111, 1989

Novelty (N)

D1 discloses nucleoside analogues where phosphate-sugar-base derivatives are linked via a linker to anthraquinone moieties. Thus claims 1, 2, 4, 6-8, 11, 13, 14, 16, 19, 20, 24, 27 and 34 lack novelty.

D2 discloses redox labelled nucleobase probes. See scheme 2, compound 15. Thus claims 34 and 38 lack novelty.

D3 discloses platinum complexes attached to guanine bases within oligonucleotides. See claims 19-22. Thus claims 34 and 35 lack novelty.

D4 discloses ferrocene attached to a base, which is then incorporated into DNA oligonucleotides. See Scheme 1, compound III. Thus claims 34 and 35 lack novelty.

D5 discloses a redox-active inorganic label to an internal base of an oligonucleotide. Thus claims 34 and 38 lack novelty.

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of V**Inventive Step (IS)**

The difference between the disclosure of the citations and the scope of the claims of the current invention is due to either the phosphate not being present as a 5'-triphosphate or derivative or the analogue being present as an oligonucleotide rather than the isolated nucleotide. These, however, are mere technical equivalents that a person skilled in the art would contemplate when carrying out the disclosure of the citations. Thus claims 1-43 lack an inventive step when compared to D1-D5 and combinations thereof.

Industrial Applicability (IA)

All claims are industrially applicable.

PATENT COOPERATION TREATY

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Applicant UNISEARCH LIMITED (et al.)		Received - 5 APR 2004 Update Y/N by: Due Date: Send to: AF

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 pages , filed with the demand,
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☐ the drawings, pages , as originally filed,
 pages , filed with the demand,
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☐ the sequence listing part of the description:

 pages , as originally filed
 pages , filed with the demand
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1. Statement

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Inventive step (IS)	Claims	YES
	Claims 1-43	NO
Industrial applicability (IA)	Claims 1-43	YES
	Claims	NO

Citations and explanations (Rule 70.7)

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